

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION**

VANTAGE MICRO LLC,

Plaintiff,

v.

**TEXAS INSTRUMENTS
INCORPORATED,**

Defendant.

Civil Action No. _____

DEMAND FOR JURY TRIAL

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Vantage Micro LLC (“Vantage Micro” or “Plaintiff”) hereby alleges for its Complaint for patent infringement against Defendant Texas Instruments Incorporated (“TI” or “Defendant”) on personal knowledge as to its own actions and on information and belief as to the actions of others, as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

THE PARTIES

2. Plaintiff Vantage Micro is a limited liability company organized under the laws of the State of Delaware, with its principal place of business at 717 North Union Street, Suite 9, Wilmington, DE 19805.

3. On information and belief, TI is a corporation organized and existing under the laws of Delaware, with its principal place of business at 12500 TI Boulevard, Dallas, Texas 75243. TI is registered with the State of Texas and may be served with process through its

registered agent, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, TX 75201. On information and belief, TI has a regular and established place of business in this District, including at least at 6412 US-75, Sherman, TX 75090.

4. On information and belief, TI designs, develops, manufactures, sells, offers to sell, and imports a wide range of electronic products and components, including, *inter alia*, interfaces and interface components, microcontrollers, processors, bare die products, wafers, and sensors.

5. On information and belief, TI makes, uses, sells, offers to sell, markets, and imports its products and services throughout the United States, including in this District, through its website and other media, through major electronics retailers in North America, and in concert and partnership with third parties who sell TI's products, either exclusively or together with others.

6. Vantage Micro is the assignee and owner of the patents at issue in this action: U.S. Patents Nos. 6,678,838, 7,414,606, 6,546,508, and 9,959,593 (collectively, the "Asserted Patents"). Vantage Micro holds all substantial rights, title, and interest in the Asserted Patents, including the exclusive right to sue TI for infringement and recover damages, including damages for past infringement.

7. Vantage Micro seeks monetary damages and prejudgment interest for TI's past and ongoing direct and indirect infringement of the Asserted Patents.

JURISDICTION AND VENUE

8. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

9. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

10. TI is subject to this Court's general personal jurisdiction at least because TI is a resident of Texas as defined by Texas law. On information and belief, TI is headquartered in Texas.

11. TI is additionally subject to this Court's general and specific personal jurisdiction because TI has sufficient minimum contacts within the State of Texas and this District, pursuant to due process and/or the Texas Long Arm Statute, Tex. Civ. Prac. & Rem. Code § 17.042. On information and belief, TI contracted with one or more Texas residents in this District and one or both parties performed the contract at least in part in the State of Texas and this District; TI committed the tort of patent infringement in State of Texas and this District; TI purposefully availed itself of the privileges of conducting business in the State of Texas and in this District; TI regularly conducts and solicits business within the State of Texas and within this District; TI recruits residents of the State of Texas and this District for employment inside or outside the State of Texas; Plaintiff's causes of action arise directly from TI's business contacts and other activities in the State of Texas and this District; and TI distributes, makes available, imports, sells and offers to sell products and services throughout the United States, including in this judicial District, and introduces infringing products and services that into the stream of commerce knowing that they would be used and sold in this judicial district and elsewhere in the United States.

12. Venue is proper in this judicial district under 28 U.S.C. § 1391 and 28 U.S.C. § 1400(b). On information and belief, TI has a regular and established place of business in this District, including at least at 6412 US-75, Sherman, TX 75090. On information and belief, TI's acts of infringement have taken place within this District. On information and belief, TI's presence in this District is substantial, including at least at 6412 US-75, Sherman, TX 75090.

TI's presence in this District includes an 80,000 square foot, 150 mm fabrication facility that produces over 4,500 device types, including at least semiconductors for use in multiple automotive, commercial, military, and space applications.

THE ASSERTED PATENTS

13. On January 13, 2004, the United States Patent and Trademark Office ("USPTO") duly and legally issued U.S. Patent No. 6,678,838 ("the '838 Patent"), entitled "Method to Track Master Contribution Information in a Write Buffer." A copy of the '838 Patent is attached hereto as Exhibit 1.

14. Vantage Micro owns all substantial right, title, and interest in the '838 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

15. On August 19, 2008, the USPTO duly and legally issued U.S. Patent No. 7,414,606 ("the '606 Patent"), entitled "Method and Apparatus for Detecting a Flat Panel Display Monitor." A copy of the '606 Patent is attached hereto as Exhibit 2.

16. Vantage Micro owns all substantial right, title, and interest in the '606 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

17. On May April 8, 2003, the USPTO duly and legally issued U.S. Patent No. 6,546,508 ("the '508 Patent"), entitled "Method and Apparatus for Fault Detection of a Processing Tool in an Advanced Process Control (APC) Framework." A copy of the '508 Patent is attached hereto as Exhibit 3.

18. Vantage Micro owns all substantial right, title, and interest in the '508 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

19. On May 1, 2018, the USPTO duly and legally issued U.S. Patent No. 9,959,593 ("the '593 Patent"), entitled "Memory Controller Having Plurality of Channels that Provides

Simultaneous Access to Data When Accessing Unified Graphics Memory.” A copy of the ’593 Patent is attached hereto as Exhibit 4.

20. Vantage Micro owns all substantial right, title, and interest in the ’593 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

COUNT I - INFRINGEMENT OF U.S. PATENT NO. 6,678,838

21. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

22. At least as of May 14, 2019, Vantage Micro placed TI on actual notice of the ’838 Patent and actual notice that its actions constituted and continued to constitute infringement of the ’838 Patent. TI has had actual knowledge of the ’838 Patent and its own infringement of the ’838 Patent since at least that time.

23. TI has infringed one or more claims of the ’838 Patent, including but not limited to Claim 11, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, at least by using electronic products wherein multiple masters (including but not limited to computer processors, processor cores, graphics processors, and noncore master peripherals) write data to a memory (including but not limited to shared memory), where the memory includes information to associate a master with the data (“’838 Infringing Products”).

24. Discovery is expected to uncover the full extent of TI’s infringement of the ’838 Patent beyond the ’838 Infringing Products already identified through public information.

25. Attached hereto as Exhibit 5, and incorporated by reference herein, is a claim chart detailing how the Keystone II System-on-Chip (SoC), which is one of the ’838 Infringing Products, satisfies each element of independent Claim 11 of the ’838 patent. On information and

belief, any use of the Keystone II SoC necessarily practices the method of Claim 11 of the '838 Patent.

26. On information and belief, TI has induced infringement of one or more claims of the '838 Patent, including but not limited to Claim 11, pursuant to 35 U.S.C. § 271(b), by encouraging its customers of the '838 Infringing Products and other third parties (including, *inter alia*, the downstream customers of its customers) to make, use, sell, offer to sell, and/or import in the United States without authorization the '838 Infringing Products (or products of which the '838 Infringing Products are components) as described above. TI has engaged in acts of inducement with the knowledge (at least as of May 14, 2019) that such actions constituted infringement of one or more claims of the '838 Patent and the specific intent to encourage that infringement.

27. TI's acts of inducement include, *inter alia*: providing the '838 Infringing Products to its customers and other third parties and intending them to use the '838 Infringing Products; providing information, advertising, and instructions for these products through its own and third-party websites (*see, e.g.*, <http://www.ti.com/product/66AK2H12>); providing potential customers with instructions on how to obtain these products and warranting the products when obtained through authorized distribution networks (*see, e.g.*, <http://www.ti.com/info-store/distributors.html>); and providing support and training to enable customers to use the '838 Infringing Products in an infringing way (*see, e.g.*, <http://www.ti.com/product/66AK2H12/support>).

28. Indeed, TI's documentation instructs developers to map applications to its multicore processors using a Master/Slave model. *See, e.g.*, Texas Instruments, Application Report SPRAB27B, Multicore Programming Guide 3-5 (August 2012), available at

<http://www.ti.com/lit/an/sprab27b/sprab27b.pdf>. TI's documentation also offers further resources from TI and others to enable manufacture, assembly, use, or sales of the '838 Infringing Products. *See, e.g., id.* at 52 (collecting sources). TI further specifically instructs, directs, and enables users of its "debug and trace" system with respect to the '838 Infringing Products. *See, e.g., Texas Instruments, KeyStone II Architecture Debug and Trace User Guide SPRUHM4* (2013).

29. On information and belief, TI has contributed to infringement of one or more claims of the '838 Patent under 35 U.S.C. § 271(c), including but not limited to Claim 11, by offering to sell or selling within the United States and/or importing into the United States without authorization, one or more component of the '838 Infringing Products (or products of which the '838 Infringing Products are components) with the knowledge (at least as of May 14, 2019) that such component(s) are especially made or especially adapted for use in an infringement of the '838 Patent and are not staple articles of commerce suitable for substantial non-infringing use.

30. TI has directly and indirectly infringed the '838 Patent and is thus liable for infringement of the '838 Patent pursuant to 35 U.S.C. § 271.

31. Vantage Micro has suffered, and continues to suffer, damages as a result of TI's infringement of the '838 Patent.

32. TI continued to infringe the '838 Patent from at least May 14, 2019 until its expiration, despite being on notice of the '838 Patent and its infringement. TI has therefore infringed the '838 Patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights since at least May 14, 2019, at least by infringing with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect

infringement. As a result of at least this conduct, Vantage Micro is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

33. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 5) for the '838 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT II - INFRINGEMENT OF U.S. PATENT NO. 7,414,606

34. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

35. At least as of May 14, 2019, Vantage Micro placed TI on actual notice of the '606 Patent and actual notice that its actions constituted and continue to constitute infringement of the '606 Patent. TI has had actual knowledge of the '606 Patent and its own infringement of the '606 Patent since at least that time.

36. TI has infringed and continues to infringe one or more claims of the '606 Patent, including but not limited to Claim 6, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, selling, offering to sell, and/or importing in the United States without authority products, devices, systems, and/or components of systems that detect, or support the detection of, monitors, including, but not limited to, Liquid Crystal Display ("LCD"), Light-Emitting Diode ("LED"), and Plasma Display Panel ("PDP") monitors using various connection interfaces or "ports," including, but not limited to, High-Definition Multimedia

Interface (“HDMI”), DisplayPort (“DP”), and/or Digital Visual Interface (“DVI”) connections that support or comply with the HDMI, DP, and/or DVI specification (“’606 Infringing Products”). The ’606 Infringing Products include, as examples and without limitation, TI’s integrated circuits (e.g., TFP410), receivers (e.g., TFP403 and TFP501), media processors/controllers (e.g., AM series such as AM5K2xxx and AM5xxx series (e.g., AM5708) and AM3xxx series (e.g., AM3894), DMxxx series such as DM385, DRX7xx series such as DRA71x and DRA75, TDAXxx series such as TDA2Ex, and OMAP series), repeaters (e.g., SN75DP119, SN75DP120, SN75DP122A, and SN75DP128A), redrivers (e.g., TDP142 and TDP158), retimers (e.g., SN65DP149 and SN75DP149), switches (e.g., HD3SS213, HD3SS215, TS3DV621, and TS3DV642), and evaluation modules (e.g., 10G-EXPANSION-EVM with TPS65987EVM).

37. Discovery is expected to uncover the full extent of TI’s infringement of the ’606 Patent beyond the ’606 Infringing Products already identified through public information.

38. Attached hereto as Exhibit 6, and incorporated by reference herein, is a claim chart detailing how a ’606 Infringing Product, TI’s DRA71x processor, infringes independent Claim 6 of the ’606 Patent. Each and every element of Claim 6 is found in this product as shown in Exhibit 6. TI is (by its actions) directly infringing, literally infringing, and/or infringing the ’606 Patent under the doctrine of equivalents. TI is thus liable for infringement of the ’606 Patent pursuant to 35 U.S.C. § 271.

39. On information and belief, TI has induced and continues to induce infringement of one or more claims of the ’606 Patent, including but not limited to Claim 6, pursuant to 35 U.S.C. § 271(b), by encouraging its customers of the ’606 Infringing Products and other third parties (including, *inter alia*, the downstream customers of its customers) to make, use, sell, offer

to sell, and/or import in the United States without authorization the '606 Infringing Products (or products of which the '606 Infringing Products are components).

40. TI's acts of inducement include, *inter alia*: providing the '606 Infringing Products to its customers and other third parties and intending them to use the '606 Infringing Products with hardware, software, and other infrastructure that enable and/or make use of these products; providing information, advertising, and instructions for these products through its own and third-party websites (*see, e.g.*, <http://www.ti.com/product/DRA718> and <http://www.spectrumdigital.com/dra71x-dra79x-tda2ex-17-am570x-cpu-board-evmx777bg-01-00-00/>); encouraging customers and other third parties to use the '606 Infringing Products (e.g., <http://www.ti.com/interface/hdmi-displayport-mipi/overview.html>); providing instructions on how to use the '606 Infringing Products (e.g., <http://www.ti.com/interface/hdmi-displayport-mipi/technical-documents.html>); and providing support and training to enable customers to use the '606 Infringing Products (*see, e.g.*, <http://www.ti.com/processors/automotive-processors/drax-infotainment-socs/support.html> and <http://www.ti.com/product/DRA718/support>).

41. For example, TI's technical documentation supplied with a '606 Infringing Product, the DRA71x processor, instructs users to configure the product for use with HDMI, DisplayPort, and/or DVI connections. *See, e.g.*, DRA71x (SR2.0) SoC for Automotive Infotainment Technical Reference Manual (SPRUIC2D), *available at* <http://www.ti.com/lit/ug/spruic2d/spruic2d.pdf>.

42. TI performed acts of inducement despite its actual knowledge since at least May 14, 2019 of the '606 Patent and its knowledge that the specific actions it actively induced and continues to actively induce on the part of its customers and other third parties constitute

infringement of the '606 Patent. At the very least, because TI has been, and remains, on notice of the '606 Patent and the accused infringement, it has been, and remains, willfully blind regarding the infringement that it has induced and continues to induce.

43. On information and belief, TI has contributed to, and continues to contribute to, infringement of one or more claims of the '606 Patent, including but not limited to Claim 6, pursuant to 35 U.S.C. § 271(c) by offering to sell or selling within the United States, importing and/or supplying in the United States without authority one or more components of the '606 Infringing Products (or products of which the '606 Infringing Products are components) with the knowledge (at least as of May 14, 2019) that such components are especially made or especially adapted for use in an infringement of the '606 Patent and are not staple articles of commerce suitable for substantial non-infringing use.

44. For example, these components detect, or support the detection of, a monitor and are also the critical and material component to displaying, or controlling the display of, images on mobile phones, personal computers, servers, notebook computers, televisions, and other consumer media products according to the claimed invention. TI supplied, and continues to supply, system on-chip components, products, or devices, including, without limitation, the '606 Infringing Products, or components thereof, with the knowledge of the '606 Patent and with the knowledge that these components constitute critical and material parts of the claimed inventions of the '606 Patent. Moreover, TI knows at least by virtue of its knowledge of its own products and the '606 Patent that these components are especially made and/or especially adapted for use as claimed in the '606 Patent and there is no substantial non-infringing use of these components.

45. Vantage Micro has suffered, and continues to suffer, damages as a result of TI's infringement of the '606 Patent.

46. TI has continued to infringe the '606 Patent since at least May 14, 2019, despite being on notice of the '606 Patent and its infringement. TI has therefore infringed the '606 Patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights since at least May 14, 2019, at least by performing acts of infringement with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Vantage Micro is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

47. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 6) for the '606 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT III - INFRINGEMENT OF U.S. PATENT NO. 6,546,508

48. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

49. At least as of the filing and service of this Complaint, Vantage Micro has placed TI on actual notice of the '508 Patent and actual notice that its actions constituted and continue to constitute infringement of the '508 Patent.

50. On information and belief, TI has infringed and continues to infringe one or more claims of the '508 Patent, including but not limited to Claim 1, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, at least by its use of Inficon FabGuard® FDC or a

similar system at its DMOS6 fabrication facility to manufacture or produce semiconductor products (“’508 Infringing Products”).

51. Discovery is expected to uncover the full extent of TI’s infringement of the ’508 Patent beyond the ’508 Infringing Products already identified through public information.

52. Attached hereto as Exhibit 7, and incorporated by reference herein, is a claim chart detailing how TI’s implementation of Inficon FabGuard® FDC or a similar system at its fabrication facilities satisfies each element of the method claimed in Claim 1 of the ’508 Patent.

53. On information and belief, TI implements substantially similar methods throughout its fabrication facilities in the United States and overseas and imports the products it manufactures overseas into the United States.

54. On information and belief, TI has infringed at least Claim 1 of the ’508 Patent, pursuant to 35 U.S.C. § 271(g), by importing into the United States, selling, offering to sell, or using within the United States products that TI or a corporate affiliate of TI has manufactured, produced, or created overseas using a process that performs each step of at least one method claim of the ’508 Patent.

55. TI has directly infringed the ’508 Patent and is thus liable for infringement of the ’508 Patent pursuant to 35 U.S.C. § 271.

56. Vantage Micro has suffered, and continues to suffer, damages as a result of TI’s infringement of the ’508 Patent.

57. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 7) for the ’508 Patent to satisfy the notice

requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT IV - INFRINGEMENT OF U.S. PATENT NO. 9,959,593

58. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

59. At least as of May 14, 2019, Vantage Micro placed TI on actual notice of the '593 Patent and actual notice that its actions constituted and continued to constitute infringement of the '593 Patent. TI has had actual knowledge of the '593 Patent and its own infringement of the '593 Patent since at least that time.

60. TI has infringed one or more claims of the '593 Patent, including but not limited to Claim 1 pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, selling, offering to sell, and/or importing in the United States without authority, microprocessors, microcontrollers, products, devices, systems, and/or components of systems that control, or include a memory controller that controls, memory channels to provide simultaneous access to data for CPU and data for clients in a unified system/graphics memory ("593 Infringing Products"). The '593 Infringing Products include, as examples and without limitation, at least TI's processors and controllers (e.g., AM5K2xxx, AM5xxx, and AM3xxx series; DRX7xx series; TDAXxx series; and OMAP series).

61. Discovery is expected to uncover the full extent of TI's infringement of the '593 Patent beyond the '593 Infringing Products already identified through public information.

62. Attached hereto as Exhibit 8, and incorporated by reference herein, is a claim chart detailing how each element of at least one claim (e.g., Claim 1) of the '593 Patent is found

in a '593 Infringing Product, the OMAP4470. On information and belief, any use of the OMAP4470 necessarily practices the claimed method of the '593 Patent.

63. On information and belief, TI has induced infringement of one or more claims of the '593 Patent, including but not limited to Claim 1, pursuant to 35 U.S.C. § 271(b) by encouraging its customers and other third parties (including, *inter alia*, the downstream customers of its customers) such as users, distributors, wholesalers, and retailers of the '593 Infringing Products to make, use, sell, offer to sell, and/or import in the United States without authorization the '593 Infringing Products (or products of which the '593 Infringing Products are components) as described above and/or by encouraging those same customers and third parties to use the '593 Infringing Products (or products of which the '593 Infringing Products are components) to perform the method of Claim 1 of the '593 Patent. TI has engaged in acts of inducement with the knowledge (at least as of May 14, 2019) that such actions constituted infringement of one or more claims of the '593 Patent and the specific intent to encourage that infringement.

64. TI's acts of inducement include, without limitation: providing the '593 Infringing Products to its customers and other third parties and intending them to use the '593 Infringing Products; providing information, advertising, and instructions for these products through its own websites (*see, e.g.*, <http://www.ti.com/processors/sitara-arm/am5x-cortex-a15/overview.html>); encouraging customers and other third parties to use the '593 Infringing Products (*e.g.*, <http://www.ti.com/lit/wp/swpy027/swpy027.pdf>); providing instructions on how to use the '593 Infringing Products (*e.g.*, <http://www.ti.com/lit/ug/sprugw7a/sprugw7a.pdf>); and providing support and training to enable customers to use the '593 Infringing Products (*see, e.g.*,

https://e2e.ti.com/support/legacy_forums/embedded/tirtos/f/355/t/290974 and

<https://www.ti.com/general/docs/litabsmultiplefilelist.tsp?literatureNumber=spruhj6>).

65. For example, TI's technical documentation supplied with a '593 Infringing Product, OMAP4470, offers instructions to users to configure the product for controlling memory channels to provide simultaneous access to data for CPU and data for clients in a unified system/graphics memory. *See, e.g.*, OMAP4470 Multimedia Device Silicon Technical Reference Manual ("Reference Manual"), available at <http://www.ti.com/lit/ug/swpu270t/swpu270t.pdf> (last accessed Aug. 6, 2019).

66. On information and belief, TI has contributed to infringement of one or more claims of the '593 Patent, including but not limited to Claim 1, pursuant to 35 U.S.C. § 271(c) by offering to sell or selling within the United States and/or importing into the United States without authorization one or more components of the '593 Infringing Products (or products of which the '593 Infringing Products are components) with the knowledge (at least as of May 14, 2019) that such components are especially made or especially adapted for use in an infringement of the '593 Patent and are not staple articles of commerce suitable for substantial non-infringing use.

67. For example, these components, products, or devices control memory channels to provide simultaneous access to data for the CPU and data for a client in a unified system/graphics memory are also the critical and material component to providing a unified memory for smartphones, tablets, desktops, laptops, televisions, and other consumer products according to the claimed invention. TI supplied these components, products, or devices, including, without limitation, the '593 Infringing Products with the knowledge of the '593 Patent and with the knowledge that these components constitute critical and material parts of the claimed inventions of the '593 Patent. Moreover, TI knew at least by virtue of its knowledge of

its own products and the '593 Patent that these components are especially made and/or especially adapted for use as claimed in the '593 Patent and there is no substantial non-infringing use for these components.

68. TI has directly and indirectly infringed the '593 Patent and is thus liable for infringement of the '593 Patent pursuant to 35 U.S.C. § 271.

69. Vantage Micro has suffered, and continues to suffer, damages as a result of TI's infringement of the '593 Patent.

70. TI has continued to infringe the '593 Patent since at least May 14, 2019, despite being on notice of the '593 Patent and its infringement. TI has therefore infringed the '593 Patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights since at least May 14, 2019, at least by infringing with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Vantage Micro is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

71. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 8) for the '593 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Vantage Micro demands judgment for itself and against TI as follows:

- a. A judgment that Defendant has infringed, and continues to infringe, one or more claims of each of the Asserted Patents;
- b. A judgment that Defendant has induced infringement, and continues to induce infringement, of one or more claims of each of the '838, '606 and the '593 Patents;
- c. A judgment that Defendant has contributed to, and continues to contribute to, the infringement of one or more claims of each of the '838, '606 and the '593 Patents;
- d. A judgment that Defendant has egregiously infringed one or more claims of each of the Asserted Patents;
- e. A judgment awarding Vantage Micro all damages adequate to compensate for Defendant's infringement, and in no event less than a reasonable royalty for Defendant's acts of infringement, including all pre-judgment and post-judgment interest at the maximum rate allowed by law;
- f. A judgment awarding Vantage Micro treble damages pursuant to 35 U.S.C. § 284 as a result of Defendant's egregious conduct;
- g. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding Vantage Micro its reasonable attorneys' fees; and
- h. A judgment awarding Vantage Micro such other relief as the Court may deem just and equitable.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiff Vantage Micro demands a trial by jury of this action.

Dated: October 7, 2019

DEVLIN LAW FIRM LLC

/s/ Timothy Devlin

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